

## December 10 PPRAA Dinner Meeting Set At Village Inn

The December meeting of the PPRAA will be a "Christmas Dinner" affair, to take place Friday evening, December 10, at the Village Inn Restaurant and Pub Lounge, 217 E. Pikes Peak Ave., in Colorado Springs.

This meeting will take the place of the regular meeting of the club which would have been held Wednesday, December 8.

Cocktails will be served at 6:30 p.m. with the dinner beginning at 7:30.

Cost of the dinner will be \$4.50 per person, which will also cover the cost of the door prizes. Cocktails will, of course, be additional.

Having the December meeting a dinner meeting, was decided upon at the November PPRAA meeting.

George Kowalski, WØGCH, PPRAA President, who took on the task of locating a place to hold the dinner meeting found himself with quite a job, since most places has already been reserved for the holidays.

"I was finally lucky," stated George. "There had been a cancellation of a reservation at the Village Inn for December 10, so I took advantage of it."

"There is only one thing that must be considered," George explained. "The room we have reserved will only hold a total of 70 persons. In order that no one might show up on the 10th and find that there is no room left, I am taking reservations for the affair."

"I would appreciate those who intend to be at the dinner call me as soon as possible (at 590-0164) so that in case we are 'over-reserved,' I can so inform those who call too late."

## 'Jammer' Reportedly Active Here On 20 Meter Amateur Band

Part of the discussion at the November PPRAA meeting centered around the activities of a "radio pervert" some place in Colorado Springs who allegedly is taking a delight in jamming on the 20 meter amateur radio band.

Don DonCarlos, WØITU, reported that the jammer was "fouling up" the RTTY and at times CW by holding his key down and putting out a signal of about 40 db over 9 for long periods.

Don reported that the offender also carried on his illegal jamming on 20 meter SSB. He expressed the idea that during his illegal activity the jammer must, at times, be intoxicated for he used vulgar, obscene language that has shocked some of the hams listening to him into tuning to other frequencies because of the language.

Reportedly the jamming is between 6 and 10 in the evening and Don stated that he had heard reports that the local jammer had messed up amateur radio nets as far away as California.

It was stated that it was believed the offender was operating from somewhere in the southwest part of the Springs.

Reportedly it is believed that his location has been spotted and PPRAA members were asked to help in definitely locating the offender so that action could be taken to stop his illegal and abortive "pastime."

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## Radio Callbook To Change To 'Annual'

The following information on the changes in the publication of the CALLBOOK magazine is reprinted from "Auto Call," publication of the Founda-

(Continued on Page 5)

## Zero Beat Wins Top Awards In ARNS 1970 Publications Contest

Zero Beat again "scored" in the annual Amateur Radio News Service's (ARNS) judging of 1970 Amateur Radio club publications, according to the announcement of the winners in the October issue of the "ARNS Bulletin," received just after the November Zero Beat went to press.

Judging of the 1970 publications was divided into four categories--single and multiple club publications printed by multilith or offset and single and multiple club publications printed by mimeograph.

In the judging, Zero Beat won first place honors in the "Best Editorial" category and tied for third place honors in the "Technical Articles" category with the "ESCARS Monitor" of the East Coast Amateur Radio Service of Ithaca, N. Y., and the "Third U. S. Army MARS," published in Memphis, Tenn.

With the judging, Zero Beat bettered its single honor award of third place in the "Editorial" category in its first ARNS contest try in 1969.

The Pueblo Ham Club's "Grid Leak" walked away with three honors in the 1970 contest--honorable mention in the "Best Editorial" and "Technical Articles" categories and tied for second place in the "Club Activity Coverage" category with "Pack Rats Cheese Bites," published by the Mt. Airy VHF Radio Club of Philadelphia, Pa.

Categories for judging in the Class A1 (single club publication printed by multilith or offset process) in which Zero Beat was entered for the 1970 contest were: General Format, Page 1 or Cover, Best Editorial, Club Activity Coverage, Club Member Contributions Technical Articles and Photographic Process.

## PPRAA Activities Committees For 1972 Are Named By Board Of Directors

Pete Demario, KØUDG, was again named Chairman of the PPRAA Board of Directors and committees to assist the Board in carrying on the activities of the club during the next year were named at the first meeting of the new Board following the October elections.

News of the selections was received by the Zero Beat editor the day after the November Zero Beat had been taken to the printers, so there was no way of getting the names of the committees in that issue.

Here are, however, the committees named by the Board of Directors at that meeting:

Secretary of the Board - Irv Ebel, WØKWV.

Nominating Committee - Don DonCarlos, WØITU, chairman (directed to select two more members).

Trustee of WAØVTV (2 meter repeater) and WAØVTU (Station at Red Cross) - George Kowalski, WØGCH.

EC, El Paso and Teller Counties -- George Kowalski, WØGCH.

2 Meter FM Committee - David Given, KØIRP; Pete Demario, KØUDG; Bill King, WØLKD, George Kowalski WØGCH.

RACES - Cecil Wood, WØTV, Radio Officer; Eldon Lewis, WAØERA, Assistant Radio Officer.

Rescue Assist., Emergency - Bob Bowers, WAØMQE, coordinator.

NTS - Wayne Brown, WZTPV/Ø; Rosemarie Lewis, WAØMNL.

MARS - Pete Demario, KØUDG.

Technical Instruction Committee - John Summef's Sr., WAØHHN; Elmer Schladweiler, WAØWJY; Charles Myers;

WAØZCS; Fred LaPlante, WA1DLZ/Ø.

Historians - Jim Reynolds, WØJMB; "Doc" Cornell, WØMCT; Gene Bacon WØCNY.

Auditing Committee - Bill Haskin, KØCEN, Art Mayer, WAØAEH.

Interference Committee - Harlan Talley, WAØJCS, chairman (directed to choose two members to assist).

YL Committee - Rhea Allison, K5-RDY/Ø; Ida Demario, WAØNTA; Linda Vidmar, WAØMNM.

SWOOP Committee (Suffering Wives of Operators) - Iris Summers, XYL of WAØHHN, chairman; Cecilia King, XYL of WØLKD; Liz DonCarlos, XYL of WØITU; Shirley Kowalski, XYL of WØGCH.

Hospitality Committee - Marty Brown, WB2VYK/Ø; chairman; Ida (Continued on Page 4)

# ZERO BEAT

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Member



Amateur Radio  
News Service

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Now that the New Year is close at hand, it's about time to start indulging in that time honored practice of making "resolutions." Unfortunately it also seems to be the practice that most of the good ones are soon broken. However, here are some suggestions--don't break these--See the secretary with your 1972 dues; get lots of good articles and good hot news to Zero Beat; attend the monthly PPRAA meetings, and most important of all, become active to help make the PPRAA one of the finest amateur radio clubs in the nation!

---Frank, WØHWH

### EDITORIAL

## More 'Honors' For Zero Beat And The PPRAA

It isn't often that a publication has the opportunity to "brag a little"--usually the space is devoted to trying to provide the reader with the "best possible" in the way of news of the club activities and other interesting items.

However, we hope we can be forgiven for doing a bit of bragging about the awards won in the ARNS judging of 1970 Amateur Radio club publications. Throughout the competition word was that "competition is tough" and that any publication which won an award "would really deserve it," because of the high quality of the publications entered in the contest.

Remember that the copies of Zero Beat which were judged in this contest were those of what we now refer to as "the old Zero Beat"--Zero Beat as it appeared before going to our new "format" in April of this year. In next year's contest, when we enter what we believe (and our readers seem to

agree) is a "much better and attractive Zero Beat" in its new form, we hope we can bring home more honors to the PPRAA.

With some more help in the "Club Member Contributions" line next year, we might finally be able to "climb in the standings" in ARNS judging to the status of the Overall category winner to show hamdom that the PPRAA, the best Amateur Radio Club in America, can also be represented by the best Amateur Radio publication in America. How can this be done? With YOUR help in contributions of news on club activities and other events in which PPRAA member participation takes place.

And our congratulations to our "fellow amateurs" down Pueblo way, with whom we have always worked closely, for the recognition their publication, "Spark Gap" received in its first year of publication. Looks like we have some good "competition" in the Steel City.

## Amateur Radio—Are We 'Losing Out'? What Can We Do To Prevent This?

The following very "thought-provoking" article by Jerry Rosenthal, WA9N-EP, which originally appeared in RPT Magazine, should give every one of us who is interested in Amateur radio and its future some very "deep concern."

Study it thoroughly and decide just what you, as an amateur, and the PPRAA, as a club, can do to offset the trend which is listed as a possibility--nay, a PROBABILITY, if something is not done to bring about some changes in our attitudes. ---Editor.

One of the most disturbing points of view that I have heard recently is a statement made by an Amateur, "I don't have to prove anything to anybody."

I pondered this statement for a while and have come to only one conclusion. If this is the general attitude of the Amateur Society at large, we are in serious trouble. When you start to examine things more closely, you find that the Amateur has taken too many

things over the years for granted. I think we are in trouble and now is the time to speak out in order to protect what has been built up over the years. Too often when we speak out, we speak

out with an attitude that sometimes indicates a nose in the air; and let me tell you this doesn't go over too well today.

(Continued on Page 7)





## ROSIE'S REPORTINGS

By  
Rosemarie Lewis  
WAØMNL

WØMRT, Wayne McDaniel and WAØ-YNP, Maury Wunderlich and their YFs have been enjoying trips. Wayne's took him and the YF back East, while Maury and YF headed Westward.

-rr-

KØLZD, Ron Seats, passed his General and Advanced Class exams on a recent trip to Denver. Winning the rig as the top prize at the ARRL convention here in June seems to have inspired Ron to "upgrade."

-rr-

WAØWLE, Jack Edlow, is with the U. S. Navy. After a leave at home he is now attending Aviation Electronics schooling at Middleton, Tennessee.

-rr-

Florence Kaplicky reports she has a grandson, Doug Guy (parents are the Guy Kaplickys in Yakima, Wash.). She says that now makes her a grandmother.

-rr-

Frank Craw, WØHWH, has been urging his YF, Midori, to get her driver's license since he brought her from Japan to the States in 1958. During his two sessions in the Fort Carson Hospital this year, she had to depend on friends for transportation to visit him and during his last convalescence he talked her into taking the driver's test and some lessons. She finally passed the driving portion of the test in November. Now Frank is wondering if he'll have to start walking to and from work, PPRAA and model railroad club meetings or sell his ham gear as a down payment on a "second car"--hi!!

-rr-

Last call for the YL Christmas Luncheon, December 11 at Dot's Fine Food at 1930 S. Nevada in the Springs. Come at 12:30 and lunch will start at 1 p.m. Cost--\$2.50 for chicken fixed their special way along with a Holiday dessert and all the trimmings. Tax and tip included. We will have election and some gift ideas. Each gal should bring a \$1 gift for the Christmas gift drawing. We encourage all gals to come--even if you are not a licensed ham you are most welcome. Make reservations with me at 632-5721.

-rr-

The Pueblo fun day, flea mart, pancake breakfast was well attended by hams from throughout the state, including some from the PPRAA. And, usual, the Pueblo bunch made everyone most welcome. The Pueblo gals had many clever gift ideas on sale.

-rr-

"Eat, drink and be merry"--at the Village Inn, December 10 for the PPRAA and at Dot's for the YLS on December 11.

## Top Band Talk == By Chris Grant, WØLRW

Recent articles have kept you informed on what life is like on 160 meters, but it's been a long time since there has been much said about how to get on. This month's article will be devoted to antennas for the top band.

Everybody knows that a half-wave-length antenna on 160 meters is twice as long as on 80 meters, or about 250 feet for 1800 kHz. Most of you, with your 80 x 110 foot lots, are obviously not going to be able to stretch out a straight 160 meter dipole without very understanding and cooperative neighbors on either side. But successful radiation on the top band does not require going to that length (little pun!) Here are the antenna systems in use by the 16 stations present on the Nov. 1 session of the Silver State Net:

WØIW uses a 40 meter dipole center-fed with 33 feet of open wire line. For 160 he ties the leads of the feedline together, adds a coil in series and taps up the coil for the best SWR.

WØBY has a 34 foot vertical with a series loading coil.

WØSIN uses a quarter-wave folded monopole (end-fed), 129 feet long.

W5PNY is using a 140 foot inverted vee, center-fed, with open wire line from an unbalanced tuner. It is 35 feet high in the center, sloping to 10 feet at the ends.

WAØPXF and WAØZHH are using full length half-wave antennas of the dipole or vee type, fed with 50 ohm coax and bent all around to fit their yards. PXF's works on 80 and 40 too.

WØNUX radiates from a helically-wound vertical of ARRL Handbook design. It is wound on a wooden stair

handrail 12-14 feet long. The turns are spaced about one quarter inch and wound for about 10 feet. Above that is a piece of aluminum conduit topped off with a capacity hat. It is mounted at "rain-gutter level" and uses the grounded gutters as a ground plane. SWR is about 1.4:1.

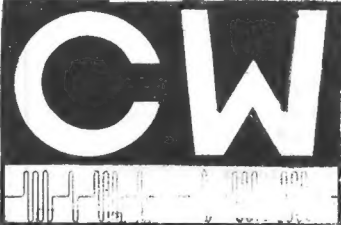
WØLRW uses a Hy-Gain 18 HT-Tower, base-loaded with a 30 inch diameter 10 inch long piece of coil stock, tapped to get the best SWR.

WØGAQ, WØLRN, WAØYIH, WAØ-YGQ, WAØTRB, W5ANB and WØLQ all use some variation of what has become known to SSN members as the "GAQ Special." It is basically a 3/8 wave-length end-fed Hertz against ground. In simple terms it is a 160-180 foot long wire with a variable capacitor in series with the wire. At 3/8 wavelength, the wire appears inductive; the capacitor tunes out this inductance to resonate the antenna. It does not use a loading coil and therefore is not subject to the losses and inefficiencies associated with such coils.

The capacitor should total 1200-2000 pf (mmf) and can either be a TRF type variable or a smaller variable in parallel with one or more fixed capacitors. Judging from the good signals radiating from these antennas and the large number of 160 meter hams using them, the "GAQ Special" is highly recommended for you newcomers who want to try a "new" band.

Next month's 160 meter transmitters.

Note: Silver State Net (SSN) now meets at 0200Z (1900 MST) on 1818 kHz. We still need Colorado Springs and Pueblo checkins.



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# President's Column

Thanks to all of you who turned in the questionnaire at the November meeting. Chuck Myers and I are presently analyzing them and will use them as a guide for the future.

A couple of small surprises were that most (80 per cent) want programs to be more technical and many want more AREC drills.

We hope to have made considerable progress on a printed circuit board project by the January meeting and also will be initiating a multiple-choice questionnaire contest. Questions will be on technical, operating and current events subjects and a prize (officers to be excluded) will be awarded.

Two important club projects with which you can help are getting more members into the club and more members to the meetings. When you get a 1972 calendar, take a red pencil and circle all the second Wednesdays (and

if you're still in doubt, read the meeting article on this page - editor). Then make a special effort to remind the hams you work with (and on the air locally) of the meeting.

Also take a few extra Zero Beat copies from the meeting and hand them out. There are an estimated 300 active hams in the area who we believe can benefit from membership in our club.

I cranked up the KWS-1 at our club station (WAØVTU at Red Cross Center) during the Sweepstakes CW weekend and managed 35 contacts in three hours. Good practice for Field Day but rather frustrating when other stations were making 30 contacts an hour!

The December meeting at the Village Inn promises to be a lot of fun--good food and prizes--a chance to relax and renew acquaintances. Come on out and join us!

73, George, WØGCH

## PPRAA Activities Committees For 1972 Named

(Continued from Page 1)

Demario, WAØNTA; Rhea Allison, K5-RDYØ; Cecilia King.

DX Committee - Gene Bacon, WØ-CNY, chairman.

Membership Committee - Don Don-Carlos, WØITU, chairman; Darrel Vogt, WAØUGW; Dean Jaynes, WAØPJH; Irvin Ebel, WØKWV; Maurice Wunderlich, WAØYMP; Harlan Park, WAØYVS; Allen Monderer, WAØZOH; Chuck Lucas, Jr., WAØWJN; Fred Palmblad, WØCYM

Contest Committee and Field Day Wayne Brown, W2TPV/Ø, chairman; George Kowalski, WØGCH.

Zero Beat - Frank Craŵ, WØHWH,

editor; Ed Pompea, KØZPG, business manager.

Colorado Council of Amateur Radio Clubs - Oak Stockton, WØROL; Charles Myers, WAØZCS.

ARRL Vice Director for PPRAA - Irvin Ebel, WØKWV.

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The astronaut was set to go and was checking the last belt when someone in the ground crew called and asked him how he felt.

He gave the man a solemn look and said; "Are you a kidder? I'm sitting on 10,000 parts bought from the lowest bidder!"

## Meeting Dates Listed For First Half Of 1972

In order for PPRAA members to get started marking meeting dates on their new 1972 calendars, following are the meeting dates and persons in charge of programs on those dates for the first half of 1972:

January 12 - Irv Ebel, WØKWV, in charge, states that he plans a film for the evening - the film not definite at this time. Also, according to President George Kowalski, there will be a special "quiz" that evening on technical operations and current events, with also a special prize for the knowledgeable winner of the quiz.

February 9 - Start looking through your "junk box" for unwanted or unneeded electronic gear and or parts for this will be the night for one of the now well-known PPRAA "auctions." You can get rid of some of those old electronic parts the XYL has been complaining about and acquire some new to incur her question "now just what are you going to do or make with that?"

March 8 - Ed Pompea, KØZPG, has not decided or announced what his program will be on this date.

April 12 - Chuck Myers, WAØZCS, in charge of the program this date.

May 10 - Wayne Brown, W2TPV/Ø, will have charge of the program this date.

June 14 - No program or "sponsor" announced for this date as yet, but as this is the month of Field Day, doubtless George Kowalski, WØGCH, will have some plans to announce during the meeting.

The Board of Directors and Officers have invited any ideas or suggestions for programs from any of the PPRAA members, or if any members would like to "take over" a program during the year, the offer would be "most welcome," according to the Directors.

"Don't be bashful about approaching the Directors with your ideas for an interesting program," the Directors have stated. "We'll always welcome an interesting program which will draw more and more members to the meetings."

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## Four Join PPRAA

Two more licensed amateur radio operators and two associates were added to the PPRAA membership rolls at the November meeting.

Newest PPRAA members are:

Gerald L. Walter, WAØTXR, 3514 Mesa Grande Drive, Colorado Springs. Steven D. Gaiser, WBØCNC, 4th Admin. Co., Fort Carson.

E. Derryck Settles, PSC Box 7328 USAF Academy.

Bill Fonville, 2932 Gordon Hill Drive Colorado Springs.

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## ROUTE MANAGER'S CORNER

By "Bud" Thompson  
WØLRN

The procedural differences between cw and 'phone nets are due to major mode differences. (1) The lack of absolute break in capability on 'phone dictates that transmissions on the net frequency be short, and (2) the high density of 'phone band QRM limits the 'phone net to a fewer number of "channels" for simultaneous use. Additionally, an "active" 'phone net will have a larger number of participants than an "active" cw net. This also emphasizes the requirement for short transmissions, in order to get all the net's business completed in a reasonable time.

Not all phone nets follow the same procedural format, but most use some form of the basic outline which follows:

1. The call up. During this time the NCS will announce the net name, its purpose, coverage and any other general information important to proper net operation. He will give ample opportunity to zero beat his station.

2. Stand by for emergency or priority traffic. All stations should listen carefully. Do not offer to relay for NCS unless he asks for help.

3. Stand by for mobiles or portables. Since these stations are usually weaker than base stations, all stations should listen carefully. Do not offer to relay unless asked to do so by NCS.

4. Stand by for specific relay stations or liaison stations. These are pre-assigned stations that will accept traffic for specific areas or other nets. (Out of state, etc.)

5. Stand by for specific relay or liaison stations bringing traffic into the net. These stations have been pre-assigned to pick up traffic from other nets and check into the net.

6. Stand by for formal traffic lists. This call may be broken up into two parts: (1) traffic for locations outside the normal coverage of the net and (2) traffic for destinations inside the normal coverage of the net. When a net is accustomed to a large number of messages, the NCS may require traffic lists by segments of the alphabet. (Stations A-C, D-F, etc.)

7. Handling of traffic listed. This part of the format varies widely with the nets. If the out of area relay stations have early net schedules to meet, these messages are handled early. (off net frequency when possible). On some nets, all traffic is passed prior to any roll call, on others, the in area messages are passed after the roll call.

8. The roll call. The NCS will call each member station for the purpose of check-in. If a roll call station has checked in previously with traffic, or as a relay station, it is not necessary to include that station on the roll call. Stations answering the roll call should do so with a short simple call. (WØNCS this is WAØYNP - no traffic). This is

not the time for information items! Informal messages, requests for QSO schedules, etc., should be listed at this time.

9. At the end of the roll call, the NCS will give opportunity to late net members and new stations to check in.

10. The final clearing of all types of traffic.

11. The closing of the net.

Several steps will make your check-in into the net more enjoyable for all:

1. Have your transmitter tuned up properly prior to net time.

2. Zero beat the net with exact precision.

3. Start out with low power (under 300 watts PEP). Do not use the linear unless it is necessary.

4. Have your messages made up in proper form prior to net time. (See ARRL Operating an Amateur Radio Station).

5. Keep all transmissions short.

6. Do not transmit unless asked to do so.

7. Wait until after net closing to request signal reports.

8. Pay attention to what is going on on net frequency.

(Approval of this article has been indicated by WAØJEV "Columbine" and WØLRW "Silver State Net").

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Make sure you don't miss out on the fun of the PPRAA Christmas Dinner meeting at the Village Inn December 10. Get in touch with PPRAA President George Kowalski at 596-0164 and make your reservation early before the limited space is all spoken for.

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## Callbook

(Continued from Page 1)

tion for Amateur Radio.

"The CALLBOOK is changing to one single major edition per year, beginning with the winter 1971-1972 edition. A 'new information service,' in CALLBOOK form, consisting of new licenses, silent keys, call letter and address changes for the preceding three months, will be initiated on a quarterly basis - every March 1, June 1 and September 1. The 'new information service' will be available by subscription only to those who have purchased the previous December issue.

"The major U. S. CALLBOOK (Winter issue) will be \$8.95 plus 25 cents mailing. The 'new information service' will be \$6.00 for three issues. The major Foreign CALLBOOK (Winter issue) will be \$6.95 plus 25 cents mailing and the 'new information service' on it will be \$4.50 for three issues.

"If you have been a subscriber and still have issues due, your subscription will be extended to cover the appropriate 'major' issues, e.g. If you still have three issues coming, you will get one issue a year for three years."

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The young applicant for a position as junior accounting clerk was being interviewed. When the subject of outside interests arose, the youth loftily said, "My avocation is color photography." The personnel manager laid down his pen. "Young man," he said steadily, "vice presidents have avocations, department heads have hobbies. What you are doing is fooling around."

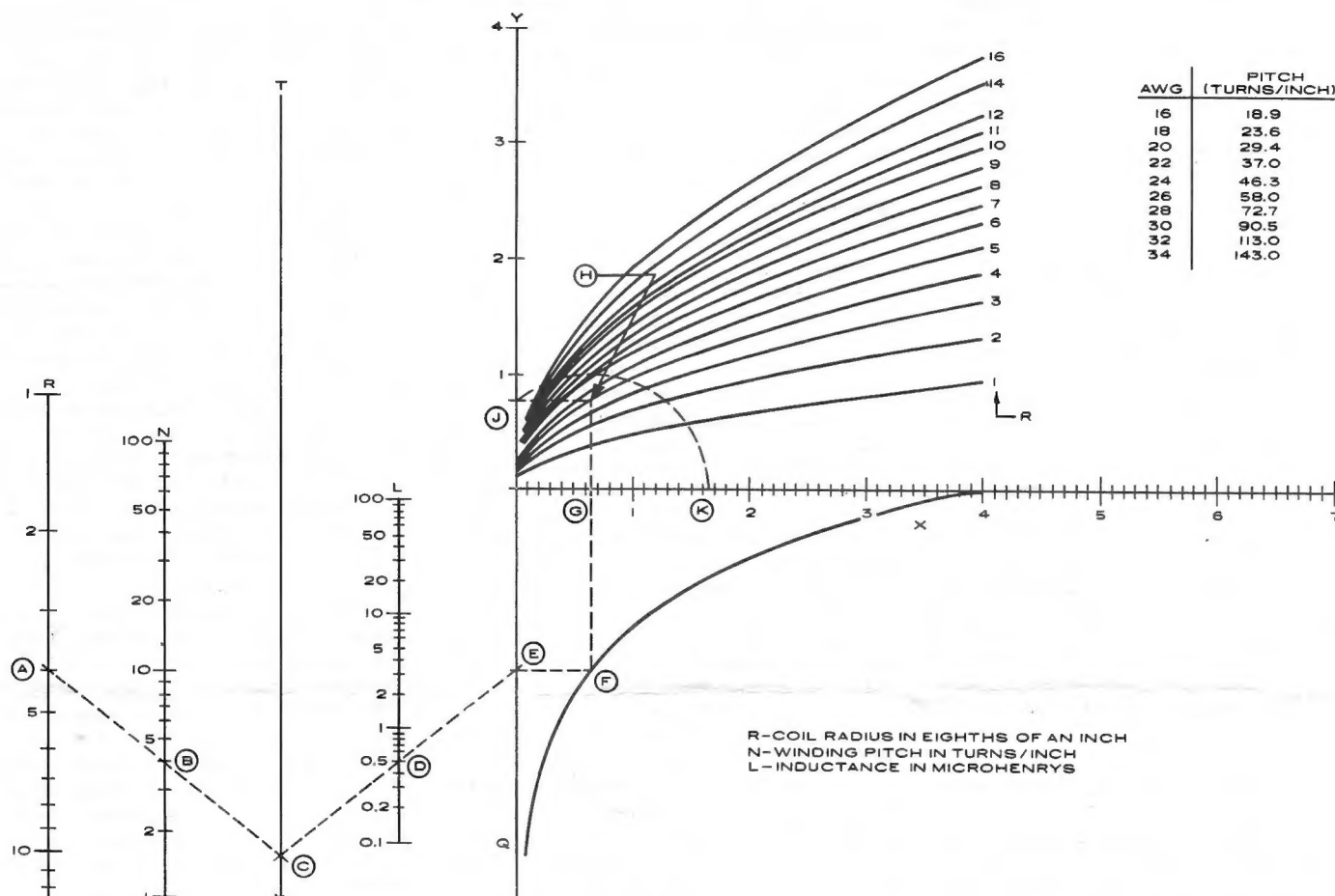
---Ken Kraft, in the Wall Street Journal

# Air-Core Coil Nomogram

By JAMES E. McALISTER

*An aid to designers and experimenters who must fabricate their own coils.  
Chart is applicable to both hand-wound and prewound coil stock.*

(Reprinted by special permission from the September 1971 ELECTRONICS WORLD)



The inductance of a single-layer air-core coil can be expressed by the well known formula:  $L = (n^2 r^2) / (9r + 10/)$  where  $r$  is coil radius in inches,  $n$  is total number of coil turns,  $/$  is total coil length in inches, and  $L$  is coil inductance in microhenrys. This formula becomes more potent if the winding pitch  $N$  in turns per inch is used in place of total turns ( $N = n/$ ). This substitution, for example, will allow quick inductance calculations to be performed for prewound coil stock of fixed pitch and radius. The problem is then simply one of choosing the proper length of stock to give the proper inductance.

Similarly, hand-wound coils can be designed by selecting an appropriate pitch and radius and, as before, solving for the proper coil length. Since pitch and radius are often chosen by trial and error, several calculations may sometimes be required before a realistic coil length is obtained. For this reason, a nomogram can be usefully employed to allow quick convergence on a meaningful design.

**Problem:** Choose the proper length of coil stock of 1/2-inch radius and 4 turns per inch to give an inductance of 0.5 microhenrys.

In this case, the radius is fixed at 1/2 inch. This value should be located on the  $R$  scale of the nomogram. Note that the values of  $R$  are expressed in eighths of an inch, so the value of  $R$  chosen is 4 (point A). Next, the winding pitch of 4 turns per inch should be found on the  $N$  scale (B). A line is drawn connecting these two points and is extended to intercept the  $T$  scale (C).

From C, another line is drawn through 0.5 (the required inductance) on the  $L$  scale (D) and is extended to cross the  $Q$  scale (E). From E, a horizontal line is projected to intercept the graph at F. A vertical line is then drawn to cross the  $X$  axis at G and on to cross the appropriate  $R$  line (the radius  $R$  is expressed in eighths of an inch here, too) at (H). A horizontal line is drawn through H to intersect the  $Y$ -axis at J.

With a pair of dividers or compass,

an arc is drawn from J (with G as the center) to the  $X$ -axis (K). The value of  $X$  at K (in this case 1.65) is the length in inches of the coil stock required to give the required inductance.

Actual calculation of the coil inductance gives 0.52 microhenrys, rather than 0.5 microhenrys. This represents an error of only 4 percent, which is certainly within reason. It should also be noted that the original formula is accurate within 1 percent whenever coil length is greater or equal to eight-tenths of the radius.

If the coil is being wound by hand, with a length of 1.65 and a pitch of 4, it may be advantageous to wind 6.6 turns evenly in 1.65 inches of length. The pitch will then automatically be the necessary 4 turns per inch.

The pitch of close-wound coils is approximately the reciprocal of the wire diameter. Approximate pitches for common wire sizes are tabulated for enameled, solid copper wire. Data

(Continued on Page 7)

# Amateur Radio—Are We 'Losing Out'? What Can We Do To Prevent This?

(Continued from Page 2)

Times have changed; Amateur radio has come a long way since the spark gap and the Cats Whiskers . . . sophistication and miniaturization. The speed of radio communications has been recognized by business, and with the advent of Citizens Band operation, the public. Over the years the threat of losing frequencies has been real. The crowding of the allocated frequencies has forced the government to re-examine the allocations. And, when you get right down to it, the only area that they can fish in is the Amateur spectrum. As many of you well know, commercial Foreign stations are already operating on some of the choice DX frequencies.

Just last month I saw a petition to the Federal Communications Commission with reference to allotting what is presently the Amateur portion of the 2 meter band for further exploitation of Citizens Band activity.

Unfortunately the name of the game to some is profit. In 1969 the sale of units to the Amateur market amounted to \$290,298; while the sale in units to the CB market was \$3,759,000. The projection for 1970 was Amateur \$291,000; CB, \$2,800,000. As you can well see, there is a great deal of imbalance between the two areas.

To further support this effort to push the Amateur from 2 meters, just look around and see how many new 10 watt transceivers have come on the market this year for 2 meters; well in the price range of the CB market.

Following World War Two and the accelerated development of the state of the art and the fact that many manufacturers had geared themselves to a war economy, the expansion of the commercial two-way field caused many manufacturers to turn their backs on the Amateur market. NOW, with the reduction in government spending, these same manufacturers are looking for the consumer market once again and they have found that they don't have one because they had abandoned it for so long. In the rush to keep everything at the status quo, they re-examined the electronic market and found the greatest growth in the Citizens Band and that the Amateur market is dead, or dying . . . so the pressure begins.

I give these facts only to give you some background, to support by opinion that at this time a change in thinking is necessary.

In 1965 there were approximately 280,000 licensed Amateurs in the U.S.

In April, 1970, the figure had fallen to 265,979; and this in the face of a constant influx of new people into the ranks. This shows a net loss of 15,000 Amateurs. As of last September, the figure was down to 265,030. In six months, the loss was 900, or an average of 100 Amateurs a month. It is a tragic state of affairs.

I don't think the individual Amateur realizes the strength in numbers. CB, incidentally, has over one million licensees. If we are going to have a voice we are going to have to build our ranks.

The reasons we have been able to hold onto our frequencies this long, and we've heard them all, are no longer valid today. When compared to the police and all of the commercial two-way systems that exist today, Amateur networks have been organized for disaster purposes. We cannot stand on the basis of a service during disaster or in time of war alone. The number of individuals involved in Amateur radio is the key.

The average age of an Amateur today is 41 years, while the average age of the American male is 28. We must do whatever it takes to get young people into our ranks. 200 million people and only a quarter of a million operators. People have a strong desire to communicate with one another. They want to talk to each other from remote locations as well as within earshot.

First... We must start to tell our story in the papers, through an active program. We must build up our image in the best way possible.

Second... Some high schools have very strong Amateur radio programs. Soes the one in your area? If not, why not? Lack of interest and direction of

the Amateur. GET involved.

Third... Does your local paper get news releases on your club activities, stories on Field Day, contests, emergency assistance, releases on theory classes, announcements of a license being received, etc?

You might say that none of this type of material will get printed. The secret of this type of campaign is consistency and follow-up. Don't be discouraged is you don't get your information in the large metropolitan papers. Try the community papers that are hungry for news.

Fourth... There are some 2,165 Amateur Radio Clubs in the U.S. I wonder how many of them have Amateurs available to speak on the subject. Offer this to your local Boy Scout groups and the local high schools.

Fifth... We must redesign our hamfests--update them to arouse interest and curiosity in the non-ham. We must make every effort to sell Amateur radio as a creative and interesting hobby.

-o-o-o-o-

In Rutherford, New Jersey, the Haselhun Williams Company was bothered by 300 pigeons fluttering around in a coal pocket. An employee suggested what he called an old family recipe. This was to mix a batch of cracked corn with some hard liquor to get the birds drunk and keep them away from the coal pocket. The mixture was spread around the coal yard, and . . . you guessed it . . . The next day, 3,000 pigeons showed up!!

(From the W6SD Carrier, San Fernando Valley (Calif.) Radio Club).

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(Continued from Page 6)

for other types of insulations and wire sizes may be found in a rather complete table in "The Radio Amateur's Handbook" (ARRL).

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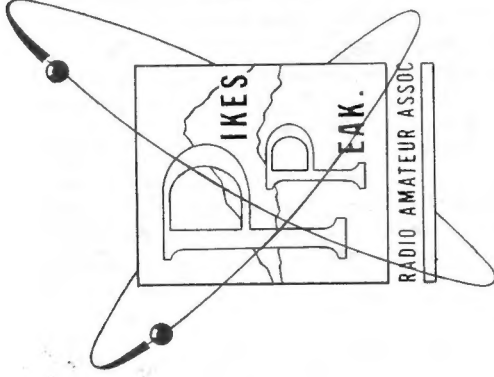
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